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The Use Of Programmed Instructional Materials

By The Office Of Communications

In October, 1959, "Signal" magazine carried an article which reported unofficially on experiments which the U. S. Army Signal School, Fort Monmouth, New Jersey, were conducting with a new way of teaching Morse Code, based on "reinforced learning principles." The article claimed that the new system, which relies upon some of the principles used in Programmed Instruction, allowed student to "progress much more rapidly than with former methods of instruction ...It is estimated that approximately ten hours (out of 37) will be saved with this method."

Intrigued by the possibility of improving their own instruction in Morse Code, members of the Training and Development Branch of the Office of Communications purchased a few copies of the "Sound-N-Sight Code Course", which is available on the open market from John F. Rider Publisher, Inc., and, in the Spring of 1960, began informal try-outs. These exploratory efforts were quite limited, however, because they did not wish to duplicate the experiment being carried on at the U. S. Army Signal School, whose results were expected within a few months. In the meantime, the U. S. Coast Guard Training Station, Groton, Connecticut, completed a carefully conducted study of these materials which was so encouraging that their training staff decided to use them as their regular method of teaching code. In a letter of John F. Rider Publisher, Inc., on 19 August 1960 the Commandant of the Training Station wrote: "As a result of changing to the reinforced learning method, our students are now taking 94 hours less classroom time to reach a code-copying speed of 20 words-per-minute." (This means that, thanks to "reinforced learning," the Coast Guard is now teaching Morse Code in about half the time it previously required.) And finally a letter from the Commandant, U. S. Signal School, arrived, early in 1961, indicating that the "Sound-N-Sight" system "has definite advantages over previous methods."

Encouraged by these results and their own experience, the Office of Communications, in February 1961, began using a modified version of the "Sound-N-Sight" method in their own training courses. Results of the first try-out were disappointing, showing little advantage for the students who had used the new method. But an analysis of student difficulties suggested that requiring the student to recognize coded letters on sight as well as sound was causing problems later on when the student was expected to rely entirely on sound. So the training staff eliminated the "Sight" training for the next running and found a great improvement.

Further try-outs of the revised system were so successful that this new training technique is now being regularly used by the OC Training Staff to teach both agents and headquarters personnel. In the year and a half that it has been in use, over 200 students have learned the Morse Code by this method. Copies of the materials have been prepared in French and Greek and have been used at training stations around the world.

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The principle advantage of the new technique centers in the time which it saves both for students and for instructors. Although no exact records have been kept of the results, training personnel estimate that students have been learning at about twice the rate that they would have learned under the older method. In addition, because the new material is entirely self-instructional, an instructor can manage at least twice as many students as he could before and still be available to give each student any individual attention he may need.